REMARKS

Reconsideration and allowance are respectfully requested.

Claims 34, 41-45 and 58-69 are pending.

Attached is Form PTO-1449 listing a document (Bergemann et al. Nucl. Acids Res. 23:4451-4456, 1995) cited in the parent U.S. Patent 6,743,620. In accordance with M.P.E.P. § 904 ("In all continuing applications, the parent applications should be reviewed by the examiner for pertinent prior art"), the Examiner must have considered this document but no record of such consideration has been made as she was required to do. See M.P.E.P. § 2001.06(b) ("The examiner must indicate in the first Office action whether the prior art in a related earlier application has been reviewed. Accordingly, no separate citation of the same prior art need be made in the later application."). Therefore, it is respectfully requested that consideration of the attached document be made of record by initialing the Form PTO-1449 or listing it on Form PTO-892.

Specification/Claim Objections

Claims 34, 41, 46, 58 and 64 were objected to as allegedly informal. But the term "destabilizing" is correctly spelled. See the attached entry for "destabilize" from dictionary.com citing *The American Heritage® Dictionary of the English Language, Fourth Ed.*

Withdrawal of the objection is requested.

35 U.S.C. 112 – Written Description

The specification must convey with reasonable clarity to persons skilled in the art that applicant was in possession of the claimed invention as of the filing date sought. See *Vas-Cath v. Mahurkar*, 19 USPQ2d 1111, 1117 (Fed. Cir. 1991).

Claims 46 and 53-57 were rejected under Section 112, first paragraph, as allegedly "failing to comply with the written description requirement." The inventor(s), at the time the application was filed, had possession of the claimed invention." Applicants traverse because cancellation of claims 46 and 53-57 moots this rejection.

Withdrawal of the written description rejection made under Section 112, first paragraph, is requested because the specification conveys to a person skilled in the art that Applicants were in possession of the claimed invention as of the filing date.

35 U.S.C. 112 – Definiteness

Claims 58-69 were rejected under Section 112, second paragraph, as being allegedly "indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention." Applicants traverse.

The term "foreign" gene is equivalent to *heterologous* gene, which are terms of art. See, for example, U.S. Patent 5,304,640 at col. 11, lines 11-13 ("Foreign DNA is defined as heterologous DNA, which is DNA not naturally found in the host cell"). This term is also consistent with the definition of heterologous as *derived from a different species*. See the attached entry for "heterologous" from dictionary.com citing *The American Heritage® Dictionary of the English Language, Fourth Ed.* Therefore, it is clear that a "foreign" gene is not naturally found in the host cell of the expression vector, i.e., derived from a different species than the host cell.

Applicants request withdrawal of the Section 112, second paragraph, rejection because the pending claims are clear and definite.

Double Patenting

Claims 34, 41-45 and 64-69 were rejected under the judicially-created doctrine of obviousness-type double patenting as being allegedly unpatentable over claims 1-2, 6-7, 13, 16, 20 and 22-23 of U.S. Patent 6,743,620. Applicants traverse because the terminal disclaimer submitted on April 27, 2005 moots this rejection.

It should be noted that the filing of a terminal disclaimer to overcome a rejection based on non-statutory double patenting is not an admission that the rejection was proper. See *Quad Environmental Technologies Corp. v. Union Sanitary District*, 20 USPQ2d 1392, 1394-95 (Fed. Cir. 1991). The Court stated that the "filing of a terminal disclaimer simply serves the statutory function of removing the rejection of double patenting, and raises neither a presumption nor estoppel on the merits of the rejection."

Thus, submission of a terminal disclaimer is not an admission that the pending claims are obvious over the claims of U.S. Patent 6,743,620.

Withdrawal of the double patenting rejection is requested.

Conclusion

Having fully responded to all of the pending objections and rejections contained in this Office Action, Applicants submit that the claims are in condition for allowance and earnestly solicit an early Notice to that effect. The Examiner is invited to contact the undersigned if any further information is required.

Respectfully submitted,

NIXON & VANDERHYE P.C.

By: 

Gary R. Tanigawa
Reg. No. 43,180

901 North Glebe Road, 11th Floor
Arlington, VA 22203-1808
Telephone: (703) 816-4000
Facsimile: (703) 816-4100

2 entries found for *destabilize*.

de·sta·bi·lize Pronunciation Key (dē-stā′bə-līz′)
tr.v. **de·sta·bi·lized, de·sta·bi·liz·ing, de·sta·bi·liz·es**

1. To upset the stability or smooth functioning of: *a policy that threatens to destabilize the economy; a new weapon that threatens to destabilize nuclear deterrence.*
2. To undermine the power of (a government or leader) by subversive or terrorist acts.

---

de·sta′bi·li·za′tion (-lĭ-zā′shən) *n.*

linked are contiguous and, in the case of a secretory leader, contiguous and in reading phase. However, enhancers do not have to be contiguous. Linking is accomplished by ligation at convenient restriction sites. If such sites do not exist, then synthetic oligonucleotide adaptors or linkers are used in accord with conventional practice.

The terms "replicable expression vehicle" and "expression vehicle" refer to a piece of DNA, usually double-stranded, which may have inserted into it a piece of foreign DNA. Foreign DNA is defined as heterologous DNA, which is DNA not naturally found in the host cell. The vehicle is used to transport the foreign or heterologous DNA into a suitable host cell. Once in the host cell, the vehicle can replicate independently of the host chromosomal DNA, and several copies of the vehicle and its inserted (foreign) DNA may be generated. In addition, the vehicle contains the necessary elements that permit translating the foreign DNA into a polypeptide. Many molecules of the polypeptide encoded by the foreign DNA can thus be rapidly synthesized.

In the context of the present invention the expressions "cell", "cell line", and "cell culture" are used interchangeably, and all such designations include progeny. It is also understood that all progeny may not be precisely identical in DNA content, due to deliberate or inadvertent mutations. Mutant progeny that have the same function or biological property as screened for in the originally transformed cell are included.

The terms "transformed host cell" and "transformed" refer to the introduction of DNA into a cell. The cell is termed a "host cell", and it may be a prokaryotic or a eukaryotic cell. Typical prokaryotic host cells include various strains of *E. coli*. Typical eukaryotic host cells are mammalian, such as Chinese hamster ovary cells or human embryonic kidney 293 cells. The introduced DNA is usually in the form of a vector containing an inserted piece of DNA. The introduced DNA sequence may be from the same species as the host cell or a different species from the host cell, or it may be a hybrid DNA sequence, containing some foreign and some homologous DNA.

"Ligation" refers to a process of forming phosphodiester bonds between two nucleic acid fragments. To ligate the DNA fragments together, their ends must be compatible. In some cases, the ends will be directly compatible after endonuclease digestion. However, it may be necessary to first convert the staggered ends commonly produced after endonuclease digestion to blunt ends to make them compatible for ligation. To blunt ends, the DNA is treated in a suitable buffer for at least 15 minutes at 15° C. with about 10 units of the Klenow fragment of DNA polymerase I or T4 DNA polymerase in the presence of the four deoxyribonucleotide triphosphates. The DNA is then purified by phenol-chloroform extraction and ethanol precipitation. The DNA fragments that are to be ligated together are put in solution in about equimolar amounts. The solution will also contain ATP, ligase buffer, and a ligase such as T4 DNA ligase at about 10 units per 0.5 μg of DNA. If the DNA is to be ligated into a vector, the vector is first linearized by digestion with the appropriate restriction endonuclease(s). The linearized fragment is then treated with bacterial alkaline phosphatase, or calf intestinal phosphatase to prevent self-ligation during the ligation step.

The terms "amino acid" and "amino acids" refer to all naturally occurring L-α-amino acids. This definition is meant to include norleucine, ornithine, and homocysteine. The amino acids are identified by either the single-letter or three-letter designations:

Asp	D	aspartic acid	Ile	I	isoleucine
Thr	T	threonine	Leu	L	leucine
Ser	S	serine	Tyr	Y	tyrosine
Glu	E	glutamic acid	Phe	F	phenylalanine
Pro	P	proline	His	H	histidine
Gly	G	glycine	Lys	L	lysine
Ala	A	alanine	Arg	R	arginine
Cys	C	cysteine	Trp	W	tryptophan
Val	V	valine	Gln	Q	glutamine
Met	M	methionine	Asn	N	asparagine

These amino acids may be classified according to the chemical composition and properties of their side chains. They are broadly classified into two groups, charged and uncharged. Each of these groups is divided into subgroups to classify the amino acids more accurately:

I. Charged Amino Acids

Acidic Residues: aspartic acid, glutamic acid

Basic Residues: lysine, arginine, histidine

II. Uncharged Amino Acids

Hydrophilic Residues: serine, threonine, asparagine, glutamine

Aliphatic Residues: glycine, alanine, valine, leucine, isoleucine

Non-polar Residues: cysteine, methionine, proline

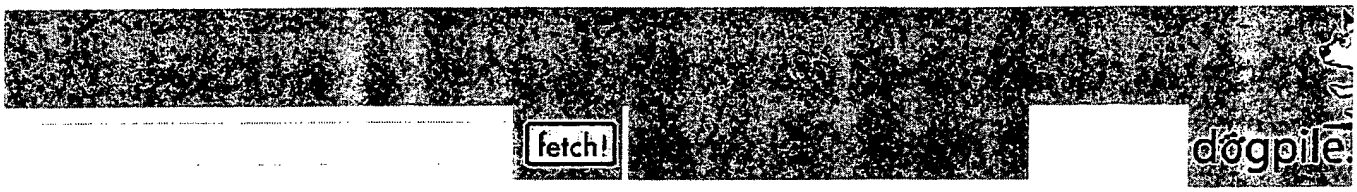
Aromatic Residues: phenylalanine, tyrosine, tryptophan

The terms "alteration", "amino acid sequence alteration", "variant" and "amino acid sequence variant" refer to molecules with some differences in their amino acid sequences as compared to the native sequence of a selectin, e.g. an L-selectin ligand. Ordinarily, the variants will possess at least 70% homology with a native selectin ligand, and preferably, they will be at least about 80%, more preferably at least about 90% homologous with a native selectin ligand. The amino acid sequence variants falling within this invention possess substitutions, deletions, and/or insertions at certain within the amino acid sequence of a native selectin ligand.

Substitutional variants are those that have at least one amino acid residue in a native sequence removed and a different amino acid inserted in its place at the same position. The substitutions may be single, where only one amino acid in the molecule has been substituted, or they may be multiple, where two or more amino acids have been substituted in the same molecule.

Substantial changes in the properties of the ligand may be obtained by substituting an amino acid with a side chain that is significantly different in charge and/or structure from that of the native amino acid. This type of substitution would be expected to affect the structure of the polypeptide backbone and/or the charge or hydrophobicity of the molecule in the area of the substitution.

Moderate changes in the ligand properties would be expected by substituting an amino acid with a side chain that is similar in charge and/or structure to that of the native molecule. This type of substitution, referred to as a conservative substitution, would not be expected to substantially alter either the structure of the polypep-



5 entries found for *heterologous*.

het·er·ol·o·gous Pronunciation Key (hĕt'ə-rŏl'ə-gəs)
adj.

1. Derived from a different species: *a heterologous graft.*
2. Of or relating to cytologic or histological elements not normally occurring in a designated part of the body.
3. Immunologically related but not identical. Used of certain cells and antiserums.

[**hetero-** + Greek `logos`, *word, relation*; see **-logy** + **-ous**.]

---

het'er·ol'o·gous·ly *adv.*